

MM Doc 97-217  
S. Delacourt

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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In the Matter of )  
)  
ITFS 2020 )  
Emergency Petition for Postponement )  
of the July 3 - July 10, 2000 Filing )  
Window for Two-Way Multipoint )  
Distribution Service and Instructional )  
Television Fixed Service Applications )

Public Notice  
DA 00-666

To the Chief, Mass Media Bureau

**OPPOSITION TO EMERGENCY PETITIONS**

**NUCENTRIX BROADBAND NETWORKS, INC.**

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June 19, 2000

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## **SUMMARY**

Nucentrix Broadband Networks, Inc. ("Nucentrix") hereby opposes any delay of the initial two-way filing window. Nucentrix is the third largest holder of MDS/ITFS spectrum in the United States, owning and leasing spectrum in 93 markets, many of which are rural. The company currently offers two-way service, pursuant to a developmental authorization, in Austin and Sherman-Denison, Texas. In addition, Nucentrix has announced plans to deploy broadband service in at least 20 markets by the end of 2001, and to launch permanent commercial service by the end of the year.

The Petitions for postponement of the initial two-way filing window are dramatically out-of-time, and may be denied on the basis alone. Although the Petitioners identify a number of difficulties in preparing two-way applications in time for the window, none support the extraordinary remedy of a stay. Reliable software is available for completing interference studies that comply with the Commission's Appendix D methodology. The data necessary to prepare such studies is now available through a combination of both online resources and the FCC's Public Reference Room. Similarly, the agency's two-way filing procedures are clearly spelled out in the FCC's rules.

Moreover, proceeding with the filing window as scheduled is necessary to advance important public interest objectives. Two-way service on MDS/ITFS spectrum will bring much needed inter-modal competition to the broadband services market. In addition, an expeditious two-way roll-out will bring advanced services to underserved rural markets, and deliver high-speed Internet connections to schools and libraries. Accordingly, the Petitions to delay the window should be denied.

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To the Chief, Mass Media Bureau

**OPPOSITION TO EMERGENCY PETITIONS**

Nucentrix Broadband Networks, Inc. (“Nucentrix”), by its attorneys and pursuant to the above-captioned public notice, hereby opposes ITFS 2020’s Emergency Petition and the Association of Federal Communications Consulting Engineers’ (“AFCCE”) Petition Requesting Revision (collectively, the “Petitions”), both of which seek a delay of the initial filing window for submitting two-way applications scheduled to open on July 3, 2000. The Petitions are dramatically out-of-time, and may be denied on that basis alone. Moreover, by holding firm to the schedule for the initial two-way filing window, the Commission will speed the deployment of wireless broadband services and, thereby, advance the public interest. Accordingly, the Petitions should be denied.

**I. INTRODUCTION**

Nucentrix is the third largest holder of MDS/ITFS spectrum in the United States, owning and leasing spectrum in 93 markets. The company serves primarily small to medium-sized markets in the central United States, many of which are rural. Nucentrix has been a leader in the effort to transition MDS/ITFS spectrum to two-way services.

Pursuant to a grant of developmental authority, the company already provides broadband wireless Internet access service over MDS/ITFS spectrum in Austin, Texas and Sherman-Denison, mainly to medium-sized and small businesses, small offices/home offices and telecommuters.

Nucentrix is using the Austin market as a laboratory for testing technologies to be used in the company's markets throughout the country. Currently, Nucentrix is testing a new technology platform for two-way systems, developed by Cisco Systems, Inc. The Cisco technology supports the provision of advanced data communications and voice services over ITFS/MDS spectrum. Testing of the same technology in a second market is scheduled to commence later this summer. Nucentrix has announced plans to deploy broadband services in at least 20 markets by the end of 2001, and fully expects to launch permanent commercial service by the end of the year.

Many of Nucentrix's markets are small and medium-sized cities and towns, frequently in rural areas. Due to the small size of these markets and the diffuse placement of the population, they are systematically underserved by broadband service providers. Any delay in the filing window will prevent the roll-out of high-speed Internet access and other advanced services to these underserved communities, and postpone entrance of a whole class of new competitors to the broadband services market.

## **II. THE PETITIONS ARE UNTIMELY**

Implicit in the Petitions to delay the two-way window is the suggestion that the window was hastily scheduled, or thrust upon unsuspecting licensees. Nothing could be further from the truth. In fact, the Commission was extremely forthcoming with

information about the scheduling of the window even before release of the March 2000 public notice, and the ITFS/MDS community had an unusually large role in shaping that schedule. The Petitioners offer no adequate explanation, or procedural justification, for their failure to participate in that process. Furthermore, as a historical matter, the process of transitioning ITFS/MDS spectrum to two-way services has hardly been rushed. Indeed, by sticking to its guns and moving forward with the two-way window, the agency will be breaking with the troubled past of the MDS/ITFS industry, which has been plagued by missed opportunities.

The Petitions do not comply with the agency's rules for reconsideration of Commission action. As ITFS 2020 correctly notes, "parties seeking reconsideration, review, or clarification of Commission action generally must do so within 30 days following the action's effective date."<sup>1</sup> The public notice announcing the initial two-way filing window was released on March 23, 2000 – almost 10 weeks before the Petitions were filed. In an effort to explain its tardiness, ITFS 2020 states only that "questions have come to light only as ITFS licensees<sup>2</sup> have begun to prepare their applications."<sup>3</sup> Yet ITFS 2020's Petition was filed just one month before the window opens. Like a student cramming for an exam the night before, one wonders why ITFS 2020 did not begin its preparations earlier. The ITFS/MDS industry has known the window was coming since well before March. The Commission first announced that a filing window

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<sup>1</sup> ITFS 2020 Petition at 12, n.29.

<sup>2</sup> ITFS 2020 holds no ITFS licenses.

<sup>3</sup> ITFS 2020 Petition at 12, n.29.

was planned for the future in a Report and Order released September 25, 1998.<sup>4</sup> That notification was repeated in a Report and Order on Reconsideration in July of 1999.<sup>5</sup> As ITFS 2020 acknowledges, thereafter a lobbying campaign commenced and the two-way window was scheduled for July at the behest of, among others, the ITFS community.<sup>6</sup> Having elected not to participate in that scheduling process, ITFS 2020 is too late in raising objections now.

The only procedural basis for accepting the Petitions at this time is if they are treated as requests for stay, but neither Petition satisfies the criteria for granting such a request. Whether Petitioners' requests for stay will be granted depends upon four factors:

- (1) whether Petitioners are likely to prevail on the merits;
- (2) whether Petitioners would suffer irreparable injury if the stay were withheld;
- (3) whether a stay would not substantially injure other interested parties; and
- (4) whether the public interest supports grant of a stay.<sup>7</sup>

Petitioners satisfy none of the criteria.

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<sup>4</sup> *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd 19112 (1998) ("*Two-Way Order*").

<sup>5</sup> *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 14 FCC Rcd 12764 (1999) ("*Two-Way Reconsideration Order*").

<sup>6</sup> ITFS 2020 Petition at 3.

<sup>7</sup> *Virginia Petroleum Jobbers Ass'n v. F.P.C.*, 259 F.2d 921, 925 (D.C. Cir. 1958).

The merits of this proceeding concern whether applicants for two-way authorization will be licensed to provide such services. The Petitioners have made no showing that they qualify for licenses to provide two-way services on MDS/ITFS spectrum. Indeed, because neither Petitioner is an MDS or ITFS licensee, they would have no standing in such a proceeding. Even if they were licensees, however, the Petitioners' right to be licensed for two-way services is purely speculative in the absence of an application.

As non-licensees, the Petitioners also would not be irreparably injured should the window proceed as planned. Did the Petitioners enjoy licensee status, they nevertheless would suffer no irreparable injury as a result of being unable to submit a two-way application during the initial window. After the initial one-week filing window (and the subsequent periods for settlement and filing petitions to deny) the Commission will initiate a rolling one-day filing window regime.<sup>8</sup> ITFS 2020 suggests that filing during the initial window is of the utmost importance because failure to do so may have a preclusive effect on an ITFS entity's future two-way plans.<sup>9</sup> These fears are exaggerated. The interference rules adopted in the two-way proceeding are extremely conservative. It is unlikely that a party will be able to design a two-way system that does not require consent from co-channel and adjacent channel licensees in an expansive area prior to receiving FCC authorization. Hence, an ITFS entity not filing during the initial window will likely be in a position to demand – in exchange for

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<sup>8</sup> *Two-Way Order* at 19148.

<sup>9</sup> ITFS 2020 Petition at 5.



providing a “no-objection” letter to a party desiring to file during the window – that any future two-way application by the ITFS entity receive the same interference protection the application would be entitled to if it were filed during the initial window. Because the interference protection afforded to ITFS licensees that elect not to file during the July window will not be compromised, no irreparable injury will occur.

A stay, however, would substantially injure other interested, licensee parties, like Nucentrix. The history of the MDS/ITFS industry has been one of missed opportunities. Originally conceived as a single channel video service, the industry languished in the early 1970s. The 1980s saw promising developments: aggregation of channels, cooperation between ITFS and MDS licensees, and program access rules. These advances gave rise to “wireless cable systems” with great promise to compete with other multichannel video program distributors, such as cable. However, the availability of only 33 ITFS/MDS channels in a given market proved to be a stumbling block. Even with the introduction of digital compression technologies that increased channel capacity, the industry witnessed a string of bankruptcies in the late 1990s.<sup>10</sup>

The promise of two-way communications has reinvigorated the ITFS/MDS industry. As discussed further below, two-way authorization will enable licensees to roll-out high speed Internet access service on ITFS/MDS spectrum, bringing to the public – and especially to rural communities – services that are in high demand, and introducing much needed competition to the market for broadband services. Moreover,

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<sup>10</sup> Elizabeth A. Rathbun, *Wireless on the Wane?*, Broadcasting & Cable, Apr. 20, 1998, at 50.

ITFS entities will receive high-speed Internet connections, advancing the Commission's goal of wiring the nation's schools and libraries.

All of these developments, however, will be compromised by a delay of the two-way window. Nucentrix has invested considerable time and resources in preparing for the two-way window, and is prepared to go forward with two-way applications in July, and commercial operations before year end. The company will be substantially injured by any delay, which would slow deployment and, thus, its ability to generate a timely return on its investment.

For the same reason, a stay is not in the public interest. After more than 25 years of trying, the ITFS/MDS industry is poised to realize a mutually beneficial and valuable use for its spectrum. The public interest would not be served by delay of the transition to two-way communications, the most beneficial and valuable use to date for ITFS/MDS spectrum.

### **III. POSTPONEMENT OF THE TWO-WAY WINDOW WILL DELAY BROADBAND COMPETITION, AND STALL THE DELIVERY OF ADVANCED BROADBAND SERVICES TO RURAL AMERICA**

Going forward with the initial two-way window, as scheduled, will advance public interest goals at the top of the Commission's agenda. As the Commission has stated, it is committed to "ensur[ing] that advanced services are deployed as rapidly as possible to all Americans."<sup>11</sup> Moreover, the agency has stressed that the key to rapid broadband deployment is inter-modal competition. As Chairman Kennard has stated, referring to

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<sup>11</sup> *FCC and States Jointly Develop a Nationwide Database of Broadband Deployment Activities*, News Release (June 6, 2000).

DSL and cable modem service providers: "Two pipes are not enough. We want to see multiple broadband pipes. I am convinced that we will have a wireless broadband pipe."<sup>12</sup> With the advent of the FCC's two-way proceeding, the wireless broadband pipe is now available. Delay of the initial filing window, however, will needlessly postpone putting that pipe into service.

A subsidiary goal of the Commission in promoting broadband deployment has been ensuring even deployment of advanced services. Bridging the "digital divide" has two components: facilitating broadband deployment in rural America and ensuring that advanced services are available to the nation's schools and libraries. Opening the two-way window on July 3, 2000 serves both objectives.

MDS/ITFS providers, and Nucentrix in particular, are better positioned than their cable and telephone company competitors to provide broadband services to rural markets. Because of the diffuse population placement in rural markets, the cost of wiring homes and business for cable modems or DSL service can be prohibitively high. MDS/ITFS two-way services present a broadband wireless solution. Because MDS/ITFS technology does not rely on a wired connection to the home, the service can be launched more quickly and cheaply in rural markets. In addition to larger markets, like Austin, Nucentrix plans to deploy broadband services in medium and small

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<sup>12</sup> William E. Kennard, *Consumer Choice Through Competition*, Address to the National Association of Telecommunications Officers and Advisors, Sept. 17, 1999, <<http://www.fcc.gov/Speeches/Kennard/spwek931.html>>.

markets.<sup>13</sup> In many of these areas, residents living up to 30 miles from the center of the market will, for the first time, be able to realize the benefits of broadband access to the Internet. Opening the initial two-way window in July is critical to ensuring that these rural consumers have access to advanced services comparable to their counterparts in urban and suburban areas.

Moreover, because of the cooperation between MDS and ITFS operators, the two-way window affords an opportunity to bring high speed Internet access to schools and libraries. Nucentrix's ITFS partners – secondary schools, universities, and other noncommercial entities – are an integral part of the company's two-way plans. Just as Nucentrix provided its ITFS partners with the equipment and support necessary for distance learning and educational programming endeavors in a one-way, video environment, the company will now provide them with high-speed Internet access. To prepare today's students for the information economy, broadband access is needed now. Proceeding on schedule with the two-way window will expedite the delivery of advanced service to ITFS entities and their students, thereby serving the public interest.

#### **IV. ROUTINE TECHNICAL AND PROCEDURAL OBSTACLES TO PREPARING TWO-WAY APPLICATIONS DO NOT SUPPORT THE DRAMATIC REMEDY OF DELAYING THE WINDOW**

The Petitions detail a number of routine logistical issues that complicate filing two-way applications by July 10, 2000. However, the Petitions fail to explain how these

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<sup>13</sup> These markets include, among others, Amarillo, Longview and Lubbock, Texas; Bartlesville, Lawton and Stillwater, Oklahoma; Monroe City, Jefferson City and Springfield, Missouri; and Springfield, Decatur and Jacksonville, Illinois.

complications distinguish the two-way application process for any first-time filing or filing in a new service, or justify the extraordinary relief of delaying the window. Accordingly, the Petitions should be denied.

**A. Reliable Software Is Available To Complete The Interference Studies Required By The Commission**

While Petitioners identify difficulties with the software available to complete the interference studies required of two-way applicants, they fail to show that the difficulties merit postponement of the initial filing window. Neither Petition disputes that the available software accurately produces interference studies consistent with the Appendix D methodology. Instead, they detail surmountable problems with the current software, many of which can be expected in any new software package. Such routine inconveniences do not justify the extraordinary remedy of delaying the window.

Nucentrix is using CelPlan's software, and has received assurances from CelPlan that its product produces interference studies consistent with the Appendix D methodology. As CelPlan has stated: "To the best of our knowledge the software is fully compliant with the [Appendix D] methodology, it is very stable and mature."<sup>14</sup> Moreover, Nucentrix's own engineers have completed the CelPlan training, used the software for a significant period and, out of an abundance of caution, completed the training a second time. Based on their experience, they are confident that the CelPlan

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<sup>14</sup> See Prepared Remarks of CelPlan to the National ITFS Association Conference Call, attached hereto as Exhibit 1.

software produces accurate, FCC-compliant studies, as represented by the manufacturer.<sup>15</sup>

The Petitioners list a variety of understandable frustrations with the available software but none prevent accurate results or timely filing and, hence, do not support a stay. Some of the Petitioners' concerns stem from the fact that not all functions of the available software are fully automated. For example, CelPlan does not address in an automated fashion the "limited exception" rule, which is used to define the protected service area when station partitioned service areas overlap.<sup>16</sup> However, this does not mean that the exception is ignored, or that CelPlan studies are inaccurate. Instead, CelPlan generates a text file with the relevant information, which the user can analyze in spreadsheet form.<sup>17</sup> Importation of the text file can be done manually.<sup>18</sup> The software has already improved in the short period of its existence, and continued improvement can be expected. Such routine annoyances do not justify the extraordinary remedy of a stay.

Other of Petitioners' concerns are simply exaggerated. In particular, ITFS 2020 suggests that 30 days of training are necessary to use CelPlan.<sup>19</sup> However, Nucentrix's

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<sup>15</sup> See Declaration of Brandon Bullis, attached hereto as Exhibit 2.

<sup>16</sup> ITFS 2020 Petition at 8.

<sup>17</sup> See Prepared Remarks of CelPlan to the National ITFS Association Conference Call, attached hereto as Exhibit 1.

<sup>18</sup> *Id.*

<sup>19</sup> ITFS 2020 Petition at 8.

engineers, like many throughout the industry, have been able to successfully manipulate the product after an intensive two-day training session.<sup>20</sup> Likewise, both ITFS 2020 and AFCCE lament the slow processing times of the available software.<sup>21</sup> Notably, however, both offer worst case scenarios and no information about average processing times.<sup>22</sup> In Nucentrix's experience, interference studies for many markets can be completed with 1-3 hours of computer processing time.<sup>23</sup> It is not all surprising that processing times are long in the largest, most heavily encumbered markets – completing interference studies in such markets has always been a difficult task. Nucentrix submits that software upgrades, de-bugging, slow processing times, and the need for training are realities of dealing with new software. Such minor difficulties do not justify a stay.

**B. The Commission's ITFS/MDS Database Was Intended To Facilitate Two-Way Filings, Not To Supplant Reference Room Research**

Petitioners appear to misunderstand the Commission's purpose and obligations in making an electronic database of ITFS/MDS license information available to applicants for two-way authorization. The database is one of many initiatives by the Commission, the most notable being ULS, to make information processing more

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<sup>20</sup> See Declaration of Brandon Bullis, attached hereto as Exhibit 2.

<sup>21</sup> ITFS 2020 Petition at 8; AFCCE Petition at 5.

<sup>22</sup> *Id.*

<sup>23</sup> See Declaration of Brandon Bullis, attached hereto as Exhibit 2.

electronic and virtual as opposed to paper and manual. Such improvements are a service to licensees, and the fact that they are not perfect or take longer than planned to implement provides no basis for waiving or delaying implementation of the Commission's rules.

All of the information needed to complete the required interference studies is available in the FCC's Public Reference Room. ITFS 2020 acknowledges as much, stating: "[w]ithout an accurate, up-to-date, electronically searchable database, ITFS and MDS licensees must instead obtain all information on incumbents' stations from the files of the FCC's Public Reference Room in Washington, DC."<sup>24</sup> Indeed, the statement is correct, and this is precisely how licensees have gathered data to support interference analyses for the past 25 years.<sup>25</sup>

To the extent Petitioners raise legitimate concerns about the availability of accurate data with which to prepare interference studies, they do not show that postponing the window is necessary to resolve that concern. ITFS 2020 complains that the Commission's database is not error-free, and requests additional time to cross-check the electronic database with the FCC's paper files and to do a true-up of the

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<sup>24</sup> ITFS 2020 Petition at 10.

<sup>25</sup> Some of ITFS 2020's complaints about the availability of data are simply absurd. For example, ITFS 2020 notes that: "a member of the public is permitted to review only three files per day, and the files are accessible only four days per week." ITFS 2020 Petition at 10. Suffice it to say that, with prior planning, the Reference Room's hours and procedures are sufficient to meet the research needs of two-way applicants. Nucentrix initiated data gathering in January of 2000.



licensee files.<sup>26</sup> The assumption is that, within 9 months (or 130 days, as AFCCE would have it) the Commission can compile a perfect data set, freeze it, and make it available to applicants to conduct interference studies. The Commission could not achieve such perfection even with unlimited time. The goal, instead, is to keep database errors to a reasonable minimum. In the event the errors are material – meaning they cause inaccuracies in interference showings – the Commission has provided for a 60 day settlement period for licensees to resolve such problems,<sup>27</sup> such that petitions to deny – which may be filed only after the settlement period – should not be an issue.

**C. The Procedural Rules Governing The Submission Of Two-Way Applications Are Sufficiently Clear**

While ITFS 2020 treats application processing issues as if they have been neglected in the two-way proceeding,<sup>28</sup> quite the opposite is true. Instead, one remarkable fact about the *Two-Way Order* and the *Two-Way Reconsideration Order* is the amount of text they devote to procedural issues. On a combined basis, the orders dedicate 24 paragraphs to application processing. The length and specificity of treatment of the issues is atypical for a Commission order. In addition, the agency has released an elaborate set of instructions to accompany new FCC Form 331. To the

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<sup>26</sup> ITFS 2020 Petition at 11.

<sup>27</sup> *Two Way Order* at 19150.

<sup>28</sup> ITFS 2020 Petition at 12-13.

extent these materials give rise to any ambiguity, as may reasonably be the case, ITFS 2020 concedes that the FCC staff has been ready to step into the breach and help.<sup>29</sup>

Apparently ITFS 2020 finds the ordinary channels of information on application processing issues to be insufficient and demands the extraordinary: published responses to “frequently asked questions” (“FAQs”) and public forums on two-way application preparation.<sup>30</sup> As with its comments concerning the availability of an electronically searchable ITFS/MDS database, ITFS 2020 has confused a service provided by the agency with an obligation. Nothing in the FCC’s rules or Commission precedent compels the agency to publish FAQs or to hold public forums to educate licensees regarding application processing issues. While the agency has undertaken such laudable initiatives with respect to spectrum auctions, for example, the measures are voluntary and not required.

## **V. CONCLUSION**

The Petitions for postponement of the initial two-way filing window are dramatically out-of-time, and may be denied on the basis alone. Although the Petitioners identify a number of difficulties in preparing two-way applications in time for the window, none support the extraordinary remedy of a stay. Reliable software is available for completing interference studies that comply with the Commission’s Appendix D methodology. The data necessary to prepare such studies is now available

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<sup>29</sup> *Id.*

<sup>30</sup> *Id.* at 13.

through a combination of online resources and the FCC's Public Reference Room. Similarly, the agency's two-way filing procedures are clearly spelled out in the FCC's rules, as well as the instructions to FCC Form 331. To the extent questions arise, adequate support is available to would-be two-way applicants.

Moreover, proceeding with the filing window as scheduled is necessary to advance important public interest objectives. Two-way service on MDS/ITFS spectrum will bring much needed inter-modal competition to the broadband services market. In addition, an expeditious two-way roll-out will bring advanced services to underserved rural markets, and deliver high-speed Internet connections to schools and libraries. Accordingly, the Petitions to delay the window should be denied.

Respectfully Submitted,

**NUCENTRIX BROADBAND NETWORKS, INC.**

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June 19, 2000

## **EXHIBIT 1**

## NIA Conference Call

June 14, 2000

Good afternoon Gentlemen:

We are participating in a very important event for the telecommunications industry that without doubt will be a cornerstone to future developments in wireless telecommunications.

Not only the wireless licensing process was changed to involve all parties but for the first time the industry decided to tackle the peer-to-peer interference issue.

The FCC and the engineers that specified what we call the Methodology or Appendix D brilliantly addressed this challenge.

We at CelPlan very quickly realized the importance of this process and accepted the challenge of developing software tools that could materialize the Methodology. Today, we consider this methodology an important part of our broadband technology and this concept has been extended to the whole broadband universe.

It was not an easy task due to the difficulties introduced by the peer-to-peer interference. Much of the ground was already addressed in the Methodology and we just had to build on top of it. CelPlan had the benefit of its existing tools that provided the framework to add the new functionality.

We started our development in September 1999 and had our first release in January 4, 2000. The availability of the tool was publicly announced February 17 at the NIA conference in Long Beach and at the CTIA trade show February 28. On April 10 the tool was made commercially available.

We licensed more than 10 entities, totaling more than 150 licenses. We trained more than 100 engineers and those trained more engineers. Up to now the software has been used for more than 100,000 hours. Our software is very user friendly and engineers can start producing applications after two or three days of training even without the existence of user manuals. Proficiency is achieved over a period of a month.

All this activity resulted in many software revisions to address all the findings and functionality requests. These resulted in a very powerful tool, extremely friendly and easy to use. We provided very powerful analysis features that slashed the design time considerably. Several optimizations were done to increase the processing speed.

We have actively contributed to improvements in the Methodology revisions, which were frozen on end of April. On June 2 we felt comfortable enough to freeze the formats and calculations until the filing window (release V3.A07). Any interference

analysis since then does not need to be re-worked with the exception of the generation of output files, which impact very little in time. Some previous studies that fall into specific cases may have to be re-analyzed.

To the best of our knowledge the software is fully compliant with the methodology, it is very stable and mature. It was independently tested by several parties and experimented on different OS and many machine brands. To help in the accuracy and consistency analysis by independent parties we introduced in the tools additional text files containing intermediate and final results.

We and other entities have designed hundreds of markets from simple super cell designs to complex multicell ones.

We will continue to improve the tool, to increase its efficiency and to automate some procedures. This is the case with the limited exception rule, also known as grand fathered interference. Today we generate a text file with all the information and all the user has to do is to analyze the data in a spreadsheet. The importation of the Methodology text files is done manually today. We are in the process of making those two steps fully automatic. The calculation of the protection of response station hubs is not required until the filing window and we gave lower priority to it.

The software has been optimized in terms of speed and is extremely fast if we consider the calculations that are involved. An RSA – PSA pair has generally more than 10 million paths each one with more than 5000 mathematical calculations. This gives about 50 billion calculations per pair. Each pair is processed today in 1 to 9 minutes, depending on the size of the RSA. A complete study of a small market can be processed in 4 hours and for a large one in 30 hours. The major part of this time is computer-processing time and the human intervention is limited to about 10 % of it. Of course we need to consider that there is preparation time and many iterations may be required to clean the interference in a market.

The Methodology is the most complete issued to date, defining many parameters to assure that everyone gets the same results in terms of interference analysis. This does not mean that every step in the process will be exactly the same when different parties do the analysis. There are several factors that can differentiate the results, like truncating, circle approximations, unit conversions, sampling rates, secondary parameters, and bounding, etc. Those parameters can cause variations in the intermediate results but should not affect the final analysis.

The interoperability issue has been addressed by the FCC with the text file output and is natural that small adjustment may be required when doing the importation. Those adjustments will have to be addressed as they arise and this is being done today.

We sincerely believe that our software is sufficiently developed to design any ITFS/MMDS market according to the rules of the Methodology.

Leonhard Korowajczuk

## **EXHIBIT 2**



## DECLARATION OF BRANDON BULLIS

I, Brandon Bullis, hereby declare as follows:

1. I am Vice President - Spectrum Resources of Nucentrix Broadband Networks, Inc. ("Nucentrix"), and an engineer by training. My credentials as an engineer practicing before the FCC are a matter of record.
2. Nucentrix's engineers have completed CelPlan's intensive two-day training session, used the software for a significant period and, out of an abundance of caution, completed the training a second time.
3. Based on the CelPlan training, we have been able to successfully manipulate the CelPlan software.
4. I am confident that the CelPlan software produces accurate, FCC-compliant interference studies, as represented by CelPlan.
5. I have reviewed the foregoing Opposition to Emergency Petitions and certify that it is true and correct as of the date hereof.

By:



Brandon Bullis  
Vice President - Spectrum Resources  
Nucentrix Broadband Networks, Inc.

June 19, 2000

## **CERTIFICATE OF SERVICE**

I hereby certify that on this 19th day of June, 2000, I caused copies of the foregoing

Opposition to Emergency Petitions to be hand delivered to the following:

Chairman William E. Kennard  
Federal Communications Commission  
445 12th Street, S.W.  
Room 8-B201  
Washington, D.C. 20554

Commissioner Gloria Tristani  
Federal Communications Commission  
445 12th Street, S.W.  
Room 8-C302  
Washington, D.C. 20554

Commissioner Susan Ness  
Federal Communications Commission  
445 12th Street, S.W.  
Room 8-B115  
Washington, D.C. 20554

Roy Stewart  
Chief, Mass Media Bureau  
Federal Communications Commission  
445 12th Street, S.W., Room 2-C347  
Washington, D.C. 20554

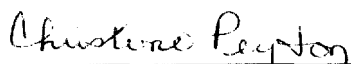
Commissioner Harold Furchtgott-Roth  
Federal Communications Commission  
445 12th Street, S.W.  
Room 8-A302  
Washington, D.C. 20554

Barbara Kriesman  
Chief, Video Services Division  
Federal Communications Commission  
445 12th Street, S.W., Room 2-A666  
Washington, D.C. 20554

Commissioner Michael Powell  
Federal Communications Commission  
445 12th Street, S.W.  
Room 8-A204  
Washington, D.C. 20554

Charles E. Dziedzic  
Federal Communications Commission  
445 12th Street, S.W., Room 2-A864  
Washington, D.C. 20554

David Roberts  
Video Services Division  
Federal Communications Commission  
445 12th Street, S.W., Room 2-A728  
Washington, D.C. 20554



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Christine Peyton